My work as a bacteriologist started years ago when there was an outbreak of a penicillin-resistant staphylococci which caused an epidemic of staph infections.

At that point, I was doing a lot of research; I was looking for microbes on the walls of hospitals, in the air-ducts of laundry rooms and operating rooms. I was very successful in my work — developing a reputation nationally, and then internationally, in the field of infection control, disinfection, sterilization and quarantine.

Subsequently, in 1969, I met with epidemiologists in London, who asked me to take a leave of absence from the University of Minnesota — where I was teaching and from where I had received a Ph.D. in medicinal bacteriology — in order to spend a few months with them learning how infection spreads in hospitals and how their techniques could prevent this.

People go to hospitals to get cured. Indeed, that is the whole function of hospitals — to cure people. Unfortunately, too many times people go to hospitals and become infected. It’s a very insidious thing, but why does it happen? Because sick people with every type of disease come to hospitals — some ill from infectious diseases, some from other types of ailments. So you have all these people together in one environment. To design an isolation system between them is not easy to do.

The epidemiologists in London were researching the spread of infections within their hospital wards, and when they invited me to come to learn their techniques, I asked the blessing for success from the Rebbe, with whom I had developed a relationship over the years.

I was very proud that I had been invited by these people at St. Bartholomew’s Hospital who were then on the forefront of studying the epidemiology of antibiotic-resistant bacteria — one of whom has since been knighted by the Queen of England — and when I mentioned all this to the Rebbe, he asked if I could send him a copy of the protocol of the research that I intended to do.

Of course I did so because, to be honest, I wanted the Rebbe to be impressed by it.

The Rebbe looked over my protocol and said, "Very, very good. Of course, I don’t understand most of it, but you’re the expert in the field, so I wish you great success. But, if you ask me, it might be a little more fruitful to investigate a different field.”

I was shocked to hear that. How could I go off to investigate another field after having been given a truly historic opportunity in this field!

But he pressed on: “Why don’t you try and study why these bacteria become resistant in the first place? If a microbe is susceptible to penicillin and then becomes resistant, how did it become resistant?”

Oy vey iz mir! I thought to myself.

I was so proud of what I was going to do, but his suggestion would mean that I would have to change completely my continued on reverse
career path. I’d have to go back and learn a lot of molecular biology and genetics, which didn’t really interest me. I was interested in the drama of epidemiology, of studying disease transmission.

In fact, I venture to say that all epidemiologists love the idea of solving a mystery. There’s drama in cutting a chain of infection — it’s what movies are made of. Movies aren’t made of the day-by-day drudgery of genetics which only molecular biologists understand.

But somehow the Rebbe understood that this line of investigation was going to yield more constructive solutions. In a letter to me dated May 5, 1969, he went into the subject in detail:

I am usually very reluctant to express a view on matters which lie outside my field of competence. However, having glanced through the detailed research program which you enclosed in your letter, I decided to make an observation:

I fail to find among the itemized points of study one aspect which, in my humble opinion, should have been of particular interest. I am referring to the recognition that certain microbes and infections may be germane to hospitals — a view which, I believe, has received some attention in pertinent literature. Hence it is very possible that methods of infection control which are effective elsewhere may lose their effectiveness because the hospital environment has produced certain strains in certain bacteria which has given them a measure of immunity in that specific environment.

I do not know whether the omission of this aspect from your project is due to the circumstance that a three months’ study period would not be sufficient to include an investigation into this area, since, undoubtedly, it would entail the problem of distinguishing “immunized” from “non-immunized” bacteria, etc., as well as the problems of changing methods of sterilization and infection control, and clinical observation, etc. Or, simply, because this question is outside your present work. Yet, it seems to me that this is a question of practical importance.

The direction he was advocating back then has since become the hot topic in science. If you look at the list of Nobel Prizes awarded for recent discoveries in medicine and physiology, you will see that the dominant field is molecular biology, which helps us understand antibiotic resistance.

Forty years ago, the Rebbe knew it! He said to me, “Velvl, if you ask me, it would be more fruitful to go into this field…” He gave his advice so modestly. He said, “You are the expert. I don’t understand the field… I’m probably wrong…” But he was completely right.

Although I didn’t follow his advice, in hindsight, I can’t help but be amazed at the Rebbe’s vision. He had no qualifications in bacteriology or molecular biology but he anticipated — by at least four decades — these developments in modern science. He was greater than life in that respect. It actually sends shivers up my spine. I think now — maybe I should have done what he advised.

Back then, the Rebbe gave me a blessing for success in my work, and I went to England and learned a lot. We solved some of the epidemics, but we didn’t find the answer to the basic question which the Rebbe had posed.

Dr. Velvl Greene (1928-2011) was a bacteriologist who served as professor of public health at the University of Minnesota and Ben-Gurion University, as well as director of the Lord Jacobovits Center for Jewish Medical Ethics in Be’er Sheva, Israel. He had previously worked for NASA’s Planetary Quarantine Division, which was charged with trying to find life on Mars. He was interviewed in April of 2008.